

ABSTRACT

A The invention relates to a process for assigning tasks in a multiprocessor digital data
 processing system ^{having} with a preemptive operating system, and an architecture for implementing ^{the} ~~this~~
 5 process. The system comprises processors (200-203, 210-213) capable of processing the tasks in
 parallel, divided into groups (200-201, 202-203). An elementary queue (5a, 5b) is associated
 with each of the processor groups (200-201, 202-203) and stores tasks to be executed. All the
 tasks to be executed (T1 through T10) are stored in a table (4). Each of the tasks (T1 through
 T10) of the table (4) is associated with one of the queues (5a, 5b) and each of the tasks stored in
 10 the queues (5a, 5b) is associated with one of the processors (200 through 201). The associations
 are made by sets of cross pointers (p200 through p203, pp5a, pp5b, pT1, pT5, pT10, p5a1
 through p5a4, and p5b1 through p5b10). In an additional embodiment, according to several
 variants, a (re-)balancing of the load of the system among elementary queues is performed.

115 ~~FIG. 4~~